

SEQUENCE LISTING

<110> Yoshinaga, Steven K.

<120> NOVEL POLYPEPTIDES INVOLVED IN IMMUNE RESPONSE

<130> A-579-C

<140> 09/264,527

<141> 1999-03-08

<160> 35

<170> PatentIn Ver. 2.1

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<221> CDS

<222> Complement((1)..(600))

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ctt tta aca gga gaa atc aat ggc tcc gcc gat cat agg atg ttt tca 96  
Leu Leu Thr Gly Glu Ile Asn Gly Ser Ala Asp His Arg Met Phe Ser  
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ttt cac aat gga ggt gta cag att tct tgt aaa tac cct gag act gtc 144  
Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val  
35 40 45

cag cag tta aaa atg cga ttg ttc aga gag aga gaa gtc ctc tgc gaa 192  
Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu  
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ctc acc aag acc aag gga agc gga aat gcg gtg tcc atc aag aat cca 240  
Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro  
65 70 75 80

atg ctc tgt cta tat cat ctg tca aac aac agc gtc tct ttt ttc cta 288  
Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu  
85 90 95

aac aac cca gac agc tcc cag gga agc tat tac ttc tgc agc ctg tcc 336  
Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser  
100 105 110

att ttt gac cca cct cct ttt caa gaa agg aac ctt agt gga gga tat 384  
Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr  
115 120 125

ttg cat att tat gaa tcc cag ctc tgc tgc cag ctg aag ctc tgg cta 432  
Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu  
130 135 140

ccc gta ggg tgt gca gct ttc gtt gtg gta ctc ctt ttt gga tgc ata 480  
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145 150 155 160

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11-0-  
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ctt atc atc tgg ttt tca aaa aag aaa tac gga tcc agt gtg cat gac 528  
Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp  
165 170 175

cct aat agt gaa tac atg ttc atg gcg gca gtc aac aca aac aaa aag 576  
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Phe His Asn Gly Gly Val Gln Ile Ser Cys Lys Tyr Pro Glu Thr Val  
35 40 45  
Gln Gln Leu Lys Met Arg Leu Phe Arg Glu Arg Glu Val Leu Cys Glu  
50 55 60  
Leu Thr Lys Thr Lys Gly Ser Gly Asn Ala Val Ser Ile Lys Asn Pro  
65 70 75 80  
Met Leu Cys Leu Tyr His Leu Ser Asn Asn Ser Val Ser Phe Phe Leu  
85 90 95  
Asn Asn Pro Asp Ser Ser Gln Gly Ser Tyr Tyr Phe Cys Ser Leu Ser  
100 105 110  
Ile Phe Asp Pro Pro Pro Phe Gln Glu Arg Asn Leu Ser Gly Gly Tyr  
115 120 125  
Leu His Ile Tyr Glu Ser Gln Leu Cys Cys Gln Leu Lys Leu Trp Leu  
130 135 140  
Pro Val Gly Cys Ala Ala Phe Val Val Val Leu Leu Phe Gly Cys Ile  
145 150 155 160  
Leu Ile Ile Trp Phe Ser Lys Lys Lys Tyr Gly Ser Ser Val His Asp  
165 170 175  
Pro Asn Ser Glu Tyr Met Phe Met Ala Ala Val Asn Thr Asn Lys Lys  
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Asp	Ser	Asn 35	Glu	Val	Ser	Leu	Ser 40	Cys	Arg	Tyr	Ser	Tyr 45	Asn	Leu	Leu
Ala	Lys 50	Glu	Phe	Arg	Ala	Ser 55	Leu	Tyr	Lys	Gly	Val 60	Asn	Ser	Asp	Val
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<223> Description of Artificial Sequence:Synthetic
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Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
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Val	Xaa	Xaa	Ser	Cys	Xaa	Tyr	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa
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Xaa	Xaa	Xaa	Leu	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Xaa	Val	Xaa	Xaa	Cys	Xaa
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Xaa	Xaa	Cys	Xaa	Xaa	Xaa	Xaa	Xaa	Asn	Xaa	Xaa	Val	Xaa	Phe	Xaa	Leu
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Val Trp Lys Lys Leu His Val Ser Ser Gly Phe Phe Ser Gly Leu Gly
20 25 30

ctg ttc ttg ctg ctg ttg agc agc ctc tgt gct gcc tct gca gag act 144
Leu Phe Leu Leu Leu Leu Ser Ser Leu Cys Ala Ala Ser Ala Glu Thr
35 40 45

gaa gtc ggt gca atg gtg ggc agc aat gtg gtg ctc agc tgc att gac 192
Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp
50 55 60

ccc cac aga cgc cat ttc aac ttg agt ggt ctg tat gtc tat tgg caa 240
Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln
65 70 75 80

atc gaa aac cca gaa gtt tcg gtg act tac tac ctg cct tac aag tct 288
Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser
85 90 95

cca ggg atc aat gtg gac agt tcc tac aag aac agg ggc cat ctg tcc 336
Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser
100 105 110

ctg gac tcc atg aag cag ggt aac ttc tct ctg tac ctg aag aat gtc 384
Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val
115 120 125

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Leu Phe Leu Leu Leu Leu Ser Ser Leu Cys Ala Ala Ser Ala Glu Thr  
35 40 45

Glu Val Gly Ala Met Val Gly Ser Asn Val Val Leu Ser Cys Ile Asp  
50 55 60

Pro His Arg Arg His Phe Asn Leu Ser Gly Leu Tyr Val Tyr Trp Gln  
65 70 75 80

Ile Glu Asn Pro Glu Val Ser Val Thr Tyr Tyr Leu Pro Tyr Lys Ser  
85 90 95

Pro Gly Ile Asn Val Asp Ser Ser Tyr Lys Asn Arg Gly His Leu Ser  
100 105 110

Leu Asp Ser Met Lys Gln Gly Asn Phe Ser Leu Tyr Leu Lys Asn Val  
115 120 125

Thr Pro Gln Asp Thr Gln Glu Phe Thr Cys Arg Val Phe Met Asn Thr  
130 135 140

Ala Thr Glu Leu Val Lys Ile Leu Glu Glu Val Val Arg Leu Arg Val  
145 150 155 160

Ala Ala Asn Phe Ser Thr Pro Val Ile Ser Thr Ser Asp Ser Ser Asn  
165 170 175

Pro Gly Gln Glu Arg Thr Tyr Thr Cys Met Ser Lys Asn Gly Tyr Pro  
180 185 190

Glu Pro Asn Leu Tyr Trp Ile Asn Thr Thr Asp Asn Ser Leu Ile Asp  
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Thr Ala Leu Gln Asn Asn Thr Val Tyr Leu Asn Lys Leu Gly Leu Tyr  
210 215 220

Asp Val Ile Ser Thr Leu Arg Leu Pro Trp Thr Ser Arg Gly Asp Val  
225 230 235 240

Leu Cys Cys Val Glu Asn Val Ala Leu His Gln Asn Ile Thr Ser Ile  
245 250 255

Ser Gln Ala Glu Ser Phe Thr Gly Asn Asn Thr Lys Asn Pro Gln Glu  
260 265 270

Thr His Asn Asn Glu Leu Lys Val Leu Val Pro Val Leu Ala Val Leu  
275 280 285

Ala Ala Ala Ala Phe Val Ser Phe Ile Ile Tyr Arg Arg Thr Arg Pro  
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His Ala

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<212> PRT  
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Leu	Phe	Leu	Leu	Leu	Leu	Ser	Ser	Leu	Cys	Ala	Ala	Ser	Ala	Glu	Thr
		35					40					45			
Glu	Val	Gly	Ala	Met	Val	Gly	Ser	Asn	Val	Val	Leu	Ser	Cys	Ile	Asp
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Pro	His	Arg	Arg	His	Phe	Asn	Leu	Ser	Gly	Leu	Tyr	Val	Tyr	Trp	Gln
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Ile	Glu	Asn	Pro	Glu	Val	Ser	Val	Thr	Tyr	Tyr	Leu	Pro	Tyr	Lys	Ser
				85					90					95	
Pro	Gly	Ile	Asn	Val	Asp	Ser	Ser	Tyr	Lys	Asn	Arg	Gly	His	Leu	Ser
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Ala	Thr	Glu	Leu	Val	Lys	Ile	Leu	Glu	Glu	Val	Val	Arg	Leu	Arg	Val
	145				150					155					160
Ala	Ala	Asn	Phe	Ser	Thr	Pro	Val	Ile	Ser	Thr	Ser	Asp	Ser	Ser	Asn
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Glu	Pro	Asn	Leu	Tyr	Trp	Ile	Asn	Thr	Thr	Asp	Asn	Ser	Leu	Ile	Asp
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Thr	Ala	Leu	Gln	Asn	Asn	Thr	Val	Tyr	Leu	Asn	Lys	Leu	Gly	Leu	Tyr
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Asp	Val	Ile	Ser	Thr	Leu	Arg	Leu	Pro	Trp	Thr	Ser	Arg	Gly	Asp	Val
	225				230					235					240
Leu	Cys	Cys	Val	Glu	Asn	Val	Ala	Leu	His	Gln	Asn	Ile	Thr	Ser	Ile
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			260					265					270		
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 Lys Val Leu Leu Pro Cys Arg Tyr Asn Ser Pro His Glu Asp Glu Ser  
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 Glu Asp Arg Ile Tyr Trp Gln Lys His Asp Lys Val Val Leu Ser Val  
 65 70 75 80  
 Ile Ala Gly Lys Leu Lys Val Trp Pro Glu Tyr Lys Asn Arg Thr Leu  
 85 90 95  
 Tyr Asp Asn Thr Thr Tyr Ser Leu Ile Ile Leu Gly Leu Val Leu Ser  
 100 105 110  
 Asp Arg Gly Thr Tyr Ser Cys Val Val Gln Lys Lys Glu Arg Gly Thr  
 115 120 125  
 Tyr Glu Val Lys His Leu Ala Leu Val Lys Leu Ser Ile Lys Ala Asp  
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 145 150 155 160  
 Lys Arg Ile Thr Cys Phe Ala Ser Gly Gly Phe Pro Lys Pro Arg Phe  
 165 170 175  
 Ser Trp Leu Glu Asn Gly Arg Glu Leu Pro Gly Ile Asn Thr Thr Ile  
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 Ser Gln Asp Pro Glu Ser Glu Leu Tyr Thr Ile Ser Ser Gln Leu Asp  
 195 200 205  
 Phe Asn Thr Thr Arg Asn His Thr Ile Lys Cys Leu Ile Lys Tyr Gly  
 210 215 220  
 Asp Ala His Val Ser Glu Asp Phe Thr Trp Glu Lys Pro Pro Glu Asp  
 225 230 235 240  
 Pro Pro Asp Ser Lys Asn Thr Leu Val Leu Phe Gly Ala Gly Phe Gly  
 245 250 255  
 Ala Val Ile Thr Val Val Val Ile Val Val Ile Ile Lys Cys Phe Cys  
 260 265 270  
 Lys His Arg Ser Cys Phe Arg Arg Asn Glu Ala Ser Arg Glu Thr Asn  
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Oglionucleotide

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Leu Phe Xaa Leu Leu Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
35 40 45  
Xaa Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Xaa Val Xaa Leu Xaa Cys Xaa  
50 55 60  
Xaa Xaa Xaa Xaa Xaa His Xaa Xaa Xaa Ser Xaa Xaa Xaa Xaa Tyr Trp  
65 70 75 80  
Gln Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Xaa Xaa Xaa Leu Xaa Xaa Xaa  
85 90 95  
Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Xaa Tyr Lys Asn Arg Xaa Xaa Xaa  
100 105 110  
Xaa Leu Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Ser Leu Xaa Xaa Xaa Xaa  
115 120 125  
Xaa Xaa Xaa Xaa Asp Xaa Xaa Xaa Xaa Xaa Cys Xaa Val Xaa Xaa Xaa  
130 135 140  
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Xaa Leu Xaa  
145 150 155 160  
Xaa Xaa Ala Xaa Phe Ser Thr Pro Xaa Ile Xaa Xaa Ser Xaa Xaa Xaa  
165 170 175  
Xaa Xaa Xaa Xaa Xaa Arg Xaa Xaa Thr Cys Xaa Xaa Xaa Xaa Gly Xaa  
180 185 190  
Pro Xaa Pro Xaa Xaa Xaa Trp Xaa Xaa Asn Xaa Xaa Xaa Xaa Xaa Xaa  
195 200 205  
Ile Xaa Thr Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
210 215 220  
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Thr Xaa Xaa Xaa  
225 230 235 240  
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Xaa Xaa Xaa Xaa Xaa Xaa Xaa  
245 250 255  
Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Asn Xaa Xaa Xaa Xaa Xaa  
260 265 270

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Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Xaa Val Xaa Val Xaa Val Xaa Xaa  
 275 280 285  
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 cga gct gat act cag gag aag gaa gtc aga gcg atg gta ggc agc gac 96  
 Arg Ala Asp Thr 20 Gln Glu Lys Glu Val 25 Arg Ala Met Val Gly 30 Ser Asp  
 gtg gag ctc agc tgc gct tgc cct gaa gga agc cgt ttt gat tta aat 144  
 Val Glu Leu Ser Cys Ala Cys Pro Glu Gly Ser Arg Phe Asp Leu Asn  
 35 40 45  
 gat gtt tac gta tat tgg caa acc agt gag tcg aaa acc gtg gtg acc 192  
 Asp Val Tyr Val Tyr Trp Gln Thr Ser Glu Ser Lys Thr Val Val Thr  
 50 55 60  
 tac cac atc cca cag aac agc tcc ttg gaa aac gtg gac agc cgc tac 240  
 Tyr His Ile Pro Gln Asn Ser Ser Leu Glu Asn Val Asp Ser Arg Tyr  
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 Arg Asn Arg Ala Leu Met Ser Pro Ala Gly Met Leu Arg Gly Asp Phe  
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 Ser Leu Arg Leu Phe Asn Val Thr Pro Gln Asp Glu Gln Lys Phe His  
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 Cys Leu Val Leu Ser Gln Ser Leu Gly Phe Gln Glu Val Leu Ser Val  
 115 120 125  
 gag gtt aca ctg cat gtg gca gca aac ttc agc gtg ccc gtc gtc agc 432  
 Glu Val Thr Leu His Val Ala Ala Asn Phe Ser Val Pro Val Val Ser  
 130 135 140  
 gcc ccc cac agc ccc tcc cag gat gag ctc acc ttc acg tgt aca tcc 480  
 Ala Pro His Ser Pro Ser Gln Asp Glu Leu Thr Phe Thr Cys Thr Ser  
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Ile	Asn	Gly	Tyr	Pro	Arg	Pro	Asn	Val	Tyr	Trp	Ile	Asn	Lys	Thr	Asp		
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Asn	Ser	Leu	Leu	Asp	Gln	Ala	Leu	Gln	Asn	Asp	Thr	Val	Phe	Leu	Asn		
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Met	Arg	Gly	Leu	Tyr	Asp	Val	Val	Ser	Val	Leu	Arg	Ile	Ala	Arg	Thr		
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Pro	Ser	Val	Asn	Ile	Gly	Cys	Cys	Ile	Glu	Asn	Val	Leu	Leu	Gln	Gln		
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aac	ctg	act	gtc	ggc	agc	cag	aca	gga	aat	gac	atc	gga	gag	aga	gac	720	
Asn	Leu	Thr	Val	Gly	Ser	Gln	Thr	Gly	Asn	Asp	Ile	Gly	Glu	Arg	Asp		
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Lys	Ile	Thr	Glu	Asn	Pro	Val	Ser	Thr	Gly	Glu	Lys	Asn	Ala	Ala	Thr		
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Trp	Ser	Ile	Leu	Ala	Val	Leu	Cys	Leu	Leu	Val	Val	Val	Ala	Val	Ala		
			260					265					270				
ata	ggc	tgg	gtg	tgc	agg	gac	cga	tgc	ctc	caa	cac	agc	tat	gca	ggt	864	
Ile	Gly	Trp	Val	Cys	Arg	Asp	Arg	Cys	Leu	Gln	His	Ser	Tyr	Ala	Gly		
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Val	Glu	Leu	Ser	Cys	Ala	Cys	Pro	Glu	Gly	Ser	Arg	Phe	Asp	Leu	Asn		
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Asp	Val	Tyr	Val	Tyr	Trp	Gln	Thr	Ser	Glu	Ser	Lys	Thr	Val	Val	Thr		
	50					55					60						
Tyr	His	Ile	Pro	Gln	Asn	Ser	Ser	Leu	Glu	Asn	Val	Asp	Ser	Arg	Tyr		
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Arg	Asn	Arg	Ala	Leu	Met	Ser	Pro	Ala	Gly	Met	Leu	Arg	Gly	Asp	Phe		
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Ser	Leu	Arg	Leu	Phe	Asn	Val	Thr	Pro	Gln	Asp	Glu	Gln	Lys	Phe	His		
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Cys	Leu	Val	Leu	Ser	Gln	Ser	Leu	Gly	Phe	Gln	Glu	Val	Leu	Ser	Val		
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His Ile 130	Tyr Glu Ser Gln 135	Leu Cys Cys Gln 140	Lys Phe Trp Leu Pro	
Ile Gly 145	Cys Ala Ala Phe 150	Val Val Val Cys 155	Ile Leu Gly Cys Ile 160	
Ile Cys Trp 165	Leu Thr Lys Lys Lys Tyr 170	Ser Ser Ser Val His 175	Asp Pro	
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Arg Leu 195	Thr Asp Val Thr Leu			

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Phe 35	His Asn Gly Gly Val Gln 40	Ile Leu Cys Lys Tyr 45	Pro Asp Ile Val	
Gln 50	Gln Phe Lys Met Gln 55	Leu Lys Gly Gly 60	Gln Ile Leu Cys Asp	
Leu 65	Thr Lys Thr Lys Gly 70	Ser Gly Asn Thr Val 75	Ser Ile Lys Ser Leu 80	
Lys Phe Cys His 85	Ser Gln Leu Ser Asn 90	Asn Ser Val Ser Phe Phe 95	Leu	
Tyr Asn Leu 100	Asp His Ser His Ala 105	Tyr Tyr Phe Cys Asn 110	Leu Ser	
Ile Phe 115	Asp Pro Pro Pro Phe 120	Val Thr Leu Thr Gly 125	Gly Tyr Leu	
His Ile 130	Tyr Glu Ser Gln 135	Leu Cys Cys Gln 140	Lys Phe Trp Leu Pro	

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